

## **AMENDMENTS TO THE SPECIFICATION**

Replace the paragraph starting at page 7, line 10, with the following replacement paragraph:

If the saturation detector 112 detects that the first power value 106 exceeds the prescribed input range for the input circuit, indicating the received wireless signal 100 has a high input level, the initial gain selector 114 resets the gain 104 to a minimum gain value (e.g., by setting and outputting a flag (F) 115 to the initial gain selector 114), enabling the internal calculator 116 to determine the optimum gain 102 based on the initial gain selector 114 setting the gain to a minimum gain value ( $G_{MIN}$ ). In other words, the internal calculator 116 determines the optimum gain 102 based on whether the received wireless signal 100 has a low input level or a high input level based on the absence or presence of saturation detected by the saturation detector 112, respectively. Consequently, the internal calculator 116 is able to initiate computations based on determining that the detected saturation corresponds to a signal having a high input level, enabling the automatic gain controller to obtain the ~~design~~ desired gain 102 within two steps, namely within ~~within~~ about two execution cycles of the state machine.

Replace the paragraph starting at page 8, line 1, with the following replacement paragraph:

If in step 204 no saturation is detected by the saturation detector 112, the gain calculator 116 calculates ~~[[210]]~~ in step 208 the desired gain based on the amplified signal 106, amplified by the existing initial gain ( $G=G_{INIT}$ ), falling within the input range of the input circuit.